

REMARKS

Claims 14-19 and 22-24 are now pending in the application. Claims 3-13 have been cancelled in this paper. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 103

- A. Claims 14 and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lundby (U.S. Pat. No. 6,856,604) in view of Hayama et al. (U.S. Pat. No. 7,006,484).
- B. Claim 16 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Lundby (U.S. Pat. No. 6,856,604) in view of Hayama et al. (U.S. Pat. No. 7,006,484) and further in view of Nakagawa et al. (U.S. Pat. No. 6,256,508).
- C. Claims 3 and 6 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Aaltonen et al. (U.S. Pat. No. 7,103,311) in view of Nakagawa et al. (U.S. Pat. No. 6,256,508).
- D. Claims 5, 7 and 9-13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Aaltonen et al. (U.S. Pat. No. 7,103,311) in view of Nakagawa et al. (U.S. Pat. No. 6,256,508) and further in view of Leung et al. (U.S. Pub. No. 2003/0087653).
- E. Claims 4, 8 and 22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Aaltonen et al. (U.S. Pat. No. 7,103,311) in view of Nakagawa et al. (U.S. Pat. No. 6,256,508) and further in view of Leung et

al. (U.S. Pub. No. 2003/0087653) and Leung (U.S. Pub. No. 2003/0078044).

F. Claims 17-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lundby (U.S. Pat. No. 6,856,604) in view of Hayama et al. (U.S. Pat. No. 7,006,484) and further in view of Leung et al. (U.S. Pub. No. 2003/0087653).

G. Claim 23 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Lundby (U.S. Pat. No. 6,856,604) in view of Hayama et al. (U.S. Pat. No. 7,006,484) and further in view of Leung et al. (U.S. Pub. No. 2003/0087653).

These rejections are respectfully traversed.

Applicant has cancelled claims 3-13 and thus the rejections to those claims have been rendered moot.

Claim 14 recites, among other things, “using the same downlink special scrambling code to broadcast the same content of the real-time broadcast service to the mobile terminals in the cells of the broadcast service hierarchy.”

Claim 14 further recites, among other things, “the signals of the real-time broadcast service transmitted in the cells of the broadcast service hierarchy are the same.” This is because the real-time broadcast service has the same content, and is scrambled (which is called “Quadrature Spreading” in IS95 or 1xEV-Do standards) using the same downlink special scrambling code.

Thus, in claim 14, different cells send the same broadcast signals (or waveforms). Therefore, the real-time broadcast signals transmitted in different cells will

be added to each other instead of interfering with each other. In this way, the real-time broadcast signals from different cells can be merged, and the power of real-time broadcast signals transmitted by base stations can be decreased. Also, the interference of real-time broadcast signals to the original service hierarchy can be decreased.

Lundby states that “the scheduling element selects an optimal time for transmitting the multi-cast on a channel marked by a special MAC_ID. The optimal time is selected by determining when the subscriber in the worst location has good channel conditions or the transmission delay of the data becomes too large.” (See Lundby, column 6, lines 31-36) Lundby at best appears to show that the scheduling element is in a base station. (See Lundby, column 6, lines 21-25) One of ordinary skill in the art would appreciate that each base station has its own service area. Therefore, the “subscriber in the worst position” determined by one base station is selected from the subscribers within its service area. As a result, different base station in the network may find out different “subscribers in the worst position” with different channel conditions, and may select different optimal time for transmitting the multi-cast service.

Moreover, Lundby, at column 5, lines 40-43, states that “although the same information is being carried to the remote stations, the transmission formats of the data packets to each remote station can be different”. In other words, the signals transmitted in different cells in Lundby appear to be different.

Hayama, at column 10, lines 34-35, states that “the Pilot PN code is added to the diffusely modulated signals”. One of ordinary skill in the art would appreciate that in IS95 standard Pilot PN codes of different cells usually have different offsets to identify

the different cells. Therefore, the diffusely modulated signals after the Pilot PN code is added (wherein the operation of adding the Pilot PN code into the diffusely modulated signals is called Quadrature Spreading) are different in the cells of the network. In other words, the signals transmitted in different cells in Hayama appears to be different.

In view of the forgoing, Applicant submits that claim 14 and its dependent claims 15-20 and 22-24 define over Lundby and Hayama even if they can be combined as asserted by the Examiner.

In addition, claim 20 recites “the mobile terminal evaluating the interference value ... caused by the downlink special scrambling code” and “subtracting this interference value from the received signal”. Because “the signals of the real-time broadcast service transmitted in the cells of the broadcast service hierarchy are the same”, they will be added to each other, and as a result the terminals can demodulate the broadcast signals more easily. Then, the terminal can evaluate the interference value from different cells caused by the broadcast signals of broadcast service hierarchy. Thus, the capacity of the mobile network can be improved.

In either Lundby or Hayama, the signals of the broadcast service transmitted in different cells appear to be different. Therefore, Lundby can not perform the same subtraction as claim 20 does. In Hayama, different cells add different Pilot PN to the broadcast signal, and the subtraction differs from claim 20.

In view of the foregoing, Applicant submits that claim 20 defines over the art cited by the Examiner additionally for these reasons.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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